



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/806,873 | 04/03/2001 | Alan Gary Blahey | P1998J096 | 6495 |

27810 7590 05/22/2002

EXXONMOBIL RESEARCH AND ENGINEERING COMPANY
P.O. BOX 900
1545 ROUTE 22 EAST
ANNANDALE, NJ 08801-0900

EXAMINER

TOOMER, CEPHIA D

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

1714

9

DATE MAILED: 05/22/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/806,873

Applicant(s)

BLAHEY ET AL.

Examiner

Cephia D. Toomer

Art Unit

1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 April 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-6 and 9-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4-6 and 9-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

Art Unit: 1714

DETAILED ACTION

1. The request filed on April 26, 2002 for a Continued Prosecution Application (CPA) under 37 CFR 1.53(d) based on parent Application No. 09/806873 is acceptable and a CPA has been established. An action on the CPA follows.

This Office action is also in response to the amendment filed March 18, 2002 in which claims 1, 6, and 9 were amended; claims 2 and 7 were canceled and claims 10-13 were added. It should be noted that the original claims were numbered as 1-10. Therefore, new claims 10-13 have been renumbered as claims 11-14.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or
(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

3. Claims 1, 4-6 and 9-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Blahey (US 5,726,133).

Blahey teaches a low ash natural gas engine oil and additive system comprising a lubricating oil basestock having a kinematic viscosity at 100 °C of about 5 to 16 cSt, a minor amount of a detergent comprising a mixture of a low TBN alkali or alkaline earth

Art Unit: 1714

metal salt and at least one more neutral alkali or alkaline earth metal salt, a viscosity index improver and a phenolic antioxidant (see abstract; col. 2, lines 1-11, 25-27). The first detergent has a TBN of about 250 and the second detergent has a TBN that is about half of the first detergent and the mixture contributes a sulfated ash amount of 0.1 to 0.6% (see col. 2, lines 31-67; col. 3, lines 1-9). The lubricating oil may be a mixture of hydrocrackate and solvent refined oils (see col. 3, lines 14-20, 46-58). The phenolic antioxidant is present in the composition in an amount from 0.05 to 1.5 vol.% and the viscosity index improver is present in an amount up to 15 vol % (see col. 4, lines 27-35, 58-67).

Accordingly, Blahey teaching all the material limitations of the claims anticipates the claims.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 4-6, 9, 10, 12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inoue (US 5,744,430).

Inoue teaches an engine oil composition which has a lower viscosity and a long lifetime (see col. 1, lines 25-41). The composition comprises a base oil having a kinematic viscosity of from 2 to 8 mm²/s at 100 °C and is selected from mineral oil

Art Unit: 1714

(solvent refined), synthetic and mixtures thereof (see col. 1, lines 60-63; col. 2, lines 55-56; col. 3, lines 1-5); a phenol ashless antioxidant in an amount from 0.1-3% by weight (see col. 2, lines 9-10; col. 5, lines 21-65); a viscosity index improver in an amount from 1 to about 10% by weight (see col. 2, lines 15-17; col. 7, lines 3-26); an alkaline earth metal salicylate detergent having a TBN from 60 to 350 (see abstract; col. 3, lines 54-57). The salicylate may be neutral or overbased (col. 3, lines 17-24). This teaching in view of *In re Kerkhoven*, 205 USPQ 1069 (CCPA 1980) (MPEP 2144.06) (combining two components each having the same function) suggests a mixture of the two salicylates.

Inoue fails to teach that the base oil possesses a KV of between about 9 to 13 cSt. However, a prima facie case of obviousness exists where the claimed ranges and the prior art do not overlap but are close enough that one skilled in the art would have expected them to have the same properties. *Titanium Metals Corps v. Banner* 227 USPQ 773 (Fed. Cir. 1985). Also the claim language about 9 reads on an oil having a KV of 8.

Applicant argues that Inoue's oil composition has an ash content of 0.5 to 1.2 wt% whereas the present invention has a content of about 0.45%.

The amount that applicant exemplifies is close enough to that disclosed by Inoue that one would expect that the oils would have the same properties. Also, applicant's claims are not limited to an ash content of about 0.45%.

Art Unit: 1714

Applicant argues that Inoue prefers to keep the viscosity of the oil of his invention in the range of 5.6 to 12.5 cSt whereas the viscosity of the oil of the present invention has a viscosity greater than 13cSt.

A prima facie case of obviousness exists where the claimed ranges and the prior art do not overlap but are close enough that one skilled in the art would have expected them to have the same properties. *Titanium Metals Corps v. Banner* 227 USPQ 773 (Fed. Cir. 1985).

Applicant argues that Inoue obtains good performance because his oil must contain a very specific aromatic content. Whereas, the enhanced performance of the oil of the present invention is obtained by the combination of a phenolic antioxidant and a low level of VI improver.

Applicant's claims do not exclude base oils that contain the aromatic content specified in Inoue. Furthermore, Inoue teaches that the composition of his invention contains from 0.1 to 3% phenolic antioxidant and from about 1 to 10% by weight of the VI improver. These ranges encompass those of the present invention.

6. Claims 1, 4-6, and 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vienna (US 3,396,114) in view of Mortier.

Vienna teaches a lubricant comprising 0.5-2 vol % of a polyalkyl methacrylate VI improver, 0.5-2 vol % of a hindered phenol, a solvent extracted lubricating oil having a viscosity of 47 SSU at 210 F to 12,000 SSU at 0 F (see abstract; col. 1, lines 1-31; col. 3, lines 20-69) and a neutral calcium sulfonate (see abstract; col. 2, lines 36-65; col. 3,

Art Unit: 1714

lines 1-18). Vienna teaches the limitations of the claims other than the differences that are discussed below.

In the first aspect, Vienna differs from the claims in that he does not specifically teach that the oil functions as a gas engine oil. However, no unobviousness is seen in this difference because Vienna teaches the same components, used in the same proportions as Applicant. Therefore, it would be reasonable to expect that the lubricant of Vienna would function as a gas engine oil. Also, since Vienna incorporates the same additives in the oil as those of the present invention, it would be reasonable to expect that the additive composition enhances the life of the oil.

In the second aspect, Vienna differs from the claims in that he fails to teach that the sulfonate detergent has a TBN of 50-300. However, Mortier teaches this difference in Table 3.2. Mortier teaches that sulfonates having a molecular weight of 375-700 have a TBN of 0-500. Given Mortier's teaching and since Vienna teaches that the sulfonates of his invention have a molecular weight of 350-500, it would be reasonable to expect that the sulfonates of Vienna would have a TBN within the claimed range.

Applicant argues that Vienna's teaching of 7 to 12 vol % of neutral calcium sulfonate would provide an amount of ash that would exceed that normally present in a low ash composition.

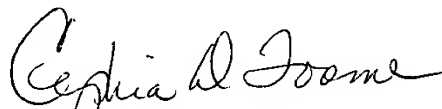
There is nothing in Vienna or Applicant's data that would indicate that the presence of 7% of sulfonate would produce an excess amount of ash in the oil composition, especially in view of Applicant's additive package comprising 6.98 and 9.6% additives.

Art Unit: 1714

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cephia D. Toomer whose telephone number is 703-308-2509. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 703-306-2777. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9310 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.


Cephia D. Toomer
Primary Examiner
Art Unit 1714

09806873\9
May 20, 2002